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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/715,497	11/19/2003	Peter Franke	5369	4505

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SILVER SPRING, MD 20910

EXAMINER

WRIGHT, ANDREW D

ART UNIT	PAPER NUMBER
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3617

DATE MAILED: 06/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/715,497	Applicant(s) FRANKE, PETER	
	Examiner Andrew Wright	Art Unit 3617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 9 is/are rejected.
- 7) ☒ Claim(s) 4-8 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>3/12/2004</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 2, and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Frost (US 933,426) in view of Landes et al. (US 3,208,421). Frost shows a hull with a bow and stern. Edges identified by reference number (11) in figure 6 are the cutting edges. They slope rearward, downwardly, and in an outward direction from the bow. Side edges are edges (13). They extend longitudinally rearward from a cutting edge. The edge (13) will necessarily have some degree of curvature due to the manufacturing of the sidewall of which it is part. Since the claim does not specify an amount or relative degree of curvature, the curvature of the edge (13), regardless how minute, meets the broad limitation of the claim. Sidewalls (12) extend up from the cutting edges and side edges. Channel (14) is formed between the side edges at the bow and extends toward the stern. The channel decreases in width (thickness) until point (15) where the bottom of the hull is substantially flat. Frost does not disclose that the sidewall form a rounded V-shaped section from the point where the side edges meet extending rearward toward the stern. Landes shows a hull with a channel that extends from the bow rearward. The channel transitions into a V-shape that extends toward the stern. Therefore it would have been obvious to one having ordinary skill in the art at the

time the invention was made to modify Frost by making the hull at (15) a V-shape instead of flat. The motivation would be to optimize hydrodynamic performance parameters of the hull. Frost does not associate any criticality with the flat bottom surface at (15) and it is well known and common to experiment with hull shapes for the purpose of optimizing hydrodynamic performance for an intended use. Furthermore, V-shaped hulls are extremely well known in the art. Therefore, using Frost as a starting point and Landes as a teaching, it would be within the scope of routine experimentation to change the flat bottom (15) to a V-shape.

3. Regarding claim 2, Landes shows that the V-shape extends rearward and upward toward the stern.

4. Regarding claim 9, Landes shows a hydrofoil (R) extending from the stern. It is well known and common to provide hulls with a rudder hydrofoil for steering the hull in the water. Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify Frost by adding a rudder at the stern.

5. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Frost in view of Landes as applied to claim 1 above, and further in view of Baker (Us 1,189,227). Frost in view of Landes does not show that the sidewalls spiral. Baker shows a hull with a bottom that transitions between a channel and a V-shape. Baker shows that the sidewalls spiral from outward (figure 3) to vertical (figure 7) to inward (figure 9). Again, it is common practice for hull designers to experiment with hull shape parameters for the purpose of optimizing the hull hydrodynamic performance for an intended use. Frost

shows outward slanted sidewalls (12). Using Frost as a starting point and Baker as a teaching, it would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify Frost by making the walls spiral form outward, to vertical, to inward as taught by Baker. The motivation would be to experiment with performance-affecting parameters of the hull.

Allowable Subject Matter

6. Claims 4-8 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Andrade, Jr. ('876) shows numerous different hull shapes thereby suggesting experimentation. Garmont ('183) shows a hull that transitions from a channel to a flat surface. Oskolsky et al. ('717) shows a hull with rounded side edges and a bottom that transitions from a channel to a rounded V-shape, to a flat bottom. L'Heureux ('725) shows a hull with a bottom that transitions from a channel to a flat bottom.

8. Any inquiry concerning this communication should be directed to examiner Andrew D. Wright at telephone number (703) 308-6841. The examiner can normally be reached Monday-Friday from 9:00 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, S. Joe Morano, can be reached at (703) 308-0230. The fax number for

Art Unit: 3617

official communications is 703-872-9306. The fax number directly to the examiner for unofficial communications is 703-746-3548.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Andrew D. Wright
Patent Examiner
Art Unit 3617

Handwritten signature and date:
5/27/04